

Idaho Observational Seat Belt Survey

2002

Final Report

Prepared by the Office of Highway Safety

IDAHO TRANSPORTATION DEPARTMENT

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Background

The methodology concerning the observational seat belt survey was changed in 1998 in accordance with The National Highway Traffic Safety Administration's (NHTSA) guidelines. An entirely new sample of observation sites was selected using a two-stage probabilistic sampling method. The method of analysis also changed to correct for the probabilistic sampling and determine the standard error correctly. Comparisons of 1998 and future surveys to historical data (1986 – 1997 surveys) should be made with caution as the new methodology differs greatly from the previous methodology.

It is physically impossible to observe every front seat occupant of every vehicle on every roadway for every day of the year. For this reason, a sample of sites was taken that covers the state geographically and captures the different types of traffic patterns, by adequately selecting the different types of roadways. The sample was selected randomly; however, counties with higher Annual Vehicle Miles of Travel (AVMT) and roadways with greater Average Daily Traffic (ADT) were more likely to be picked. While this helps to insure a cost-effective sample, it also introduces bias that must be accounted for and corrected in the analysis. Site-specific weights are calculated for a number of aspects and special software is used in the estimation process. The following table shows the 2002 estimated statewide usage, the standard error and the 95% confidence interval for the statewide estimate.

The estimated usage is the percentage of people wearing seat belts. The standard error is the average difference between the observed usage at each site and the estimated usage. The standard error is also an indication of how precise the sample is. The lower and upper 95% confidence limits define the 95% confidence interval. The 95% confidence interval is derived from the estimated usage and the standard error. The appropriate interpretation of the confidence interval is that if we were to do 100 surveys, we would expect 95 out of the resulting 100 confidence intervals to contain the “true” usage. The “true” usage is what we would get if we could observe every front seat occupant of every vehicle on every road for every day of the year. It is easier to state that we are 95% confident the “true” statewide usage in 2002 lies between the 60.4% and 65.3%.

2002 Statewide Seat Belt Usage

Estimated Statewide Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
62.9%	1.3%	60.4%	65.3%

2002 Statewide Seat Belt Usage by Vehicle Type

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Passenger Cars	66.4%	1.7%	63.2%	69.7%
Pick-ups	50.9%	1.9%	47.1%	54.7%
Vans & SUV's	70.0%	1.2%	67.7%	72.3%

The estimated seat belt usage for pick-up truck occupants continues to be significantly lower than seat belt usage for either passenger cars or vans and sport utility vehicles (SUV's).

2002 Seat Belt Usage by Transportation District

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
District 1	70.6%	1.7%	67.3%	73.8%
District 2	68.4%	2.7%	63.1%	73.8%
District 3	63.3%	1.7%	60.0%	66.6%
District 4	53.6%	2.3%	49.1%	58.1%
District 5	55.4%	3.3%	49.0%	61.8%
District 6	57.8%	3.1%	51.7%	63.9%

2002 Seat Belt Usage by County

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Ada	64.3%	2.7%	59.0%	69.5%
Bannock	58.5%	1.1%	56.3%	60.6%
Bingham	45.2%	6.9%	31.7%	58.7%
Blaine	60.0%	0.3%	59.5%	60.6%
Bonner	70.9%	2.2%	66.6%	75.3%
Bonneville	62.5%	1.8%	59.1%	66.0%
Canyon	63.2%	0.4%	62.5%	63.9%
Cassia	49.6%	4.4%	41.0%	58.2%
Elmore	52.9%	4.7%	43.7%	62.0%
Kootenai	70.2%	2.2%	65.9%	74.5%
Latah	74.0%	1.6%	70.8%	77.3%
Madison	52.4%	4.1%	44.4%	60.3%
Minidoka	48.5%	3.1%	42.4%	54.6%
Nez Perce	65.4%	1.9%	61.6%	69.2%
Payette	61.2%	0.8%	59.8%	62.7%
Twin Falls	58.9%	0.8%	57.3%	60.5%

Not all counties in Idaho are included in the sample. For a more detailed explanation of how and why these counties were selected, please refer to Appendix A (page 11).

2002 Seat Belt Usage by Day of the Week

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Sunday	54.2%	13.3%	28.1%	80.2%
Monday	63.1%	1.8%	59.6%	66.6%
Tuesday	59.6%	2.5%	54.7%	64.4%
Wednesday	64.4%	2.6%	59.3%	69.5%
Thursday	65.8%	2.4%	61.1%	70.5%
Friday	58.5%	1.5%	55.5%	61.5%
Saturday	67.2%	1.6%	64.1%	70.3%

2002 Seat Belt Usage by Time of Day

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Morning (8 - 12)	62.5%	3.0%	56.7%	68.3%
Afternoon (12 - 5)	63.9%	1.4%	61.1%	66.8%
Evening (5 - 9)	60.6%	1.3%	58.1%	63.1%

2002 Usage by Observation Site

County	Location	Designated Road	Intersection	Usage
Bonner	1	Pine (US 95)	at N. 2nd	58.9%
	2	Albeni Rd (US 2)	at SH 57	65.9%
	3	Dufort Rd	at US 95	73.3%
	4	US 95	at Larch	71.1%
	5	Cedar	at Boyer	61.4%
	6	US 2	at Division	76.2%
Kootenai	7	I-90 - Off Ramp	Exit # 7 (SH 41)	67.9%
	8	Mullan Rd	at SH 41	63.9%
	9	SH 41	at SH 53	70.6%
	10	SH 53	at US 95	74.3%
	11	15th Street	at Sherman Ave	75.0%
	12	I-90 - Off Ramp	Exit #14	70.0%
	13	US 95	At SH 53	80.5%
	14	Lincoln Way (US 95)	at Appleway	79.3%
Latah	93	SH 8	at Blaine	65.8%
	94	6th St	at Blaine	76.4%
	95	Jackson St	at 6th St	76.8%
	96	US 95	at Sweet Ave	73.6%
Nez Perce	97	US 12	at 3rd Ave N.	80.0%
	98	Main	at 13th St	69.8%
	99	16th Ave	at 17th St.	62.7%
	100	Powers Ave	at Thain Rd	67.1%
Ada	15	Overland	at Meridian Rd.	59.7%
	16	SH 55	at Floating Feather	73.8%
	17	Collister Dr	at Catalpa Dr	60.5%
	18	Mcmillan Rd	at Locust Grove	62.2%
	19	Franklin Rd	at Ten Mile	63.8%
	20	I-184 - Off Ramp	Curtis Road Exit	69.2%
	21	Chinden Blvd	at 36th St.	69.2%
	22	Cole Road	at Emerald	72.7%
	23	9th Street	at River St	70.3%
	24	Hayes St	at 13th St	72.6%
	25	N. Liberty	at Fairview	63.1%

2002 Usage by Observation Site - Continued

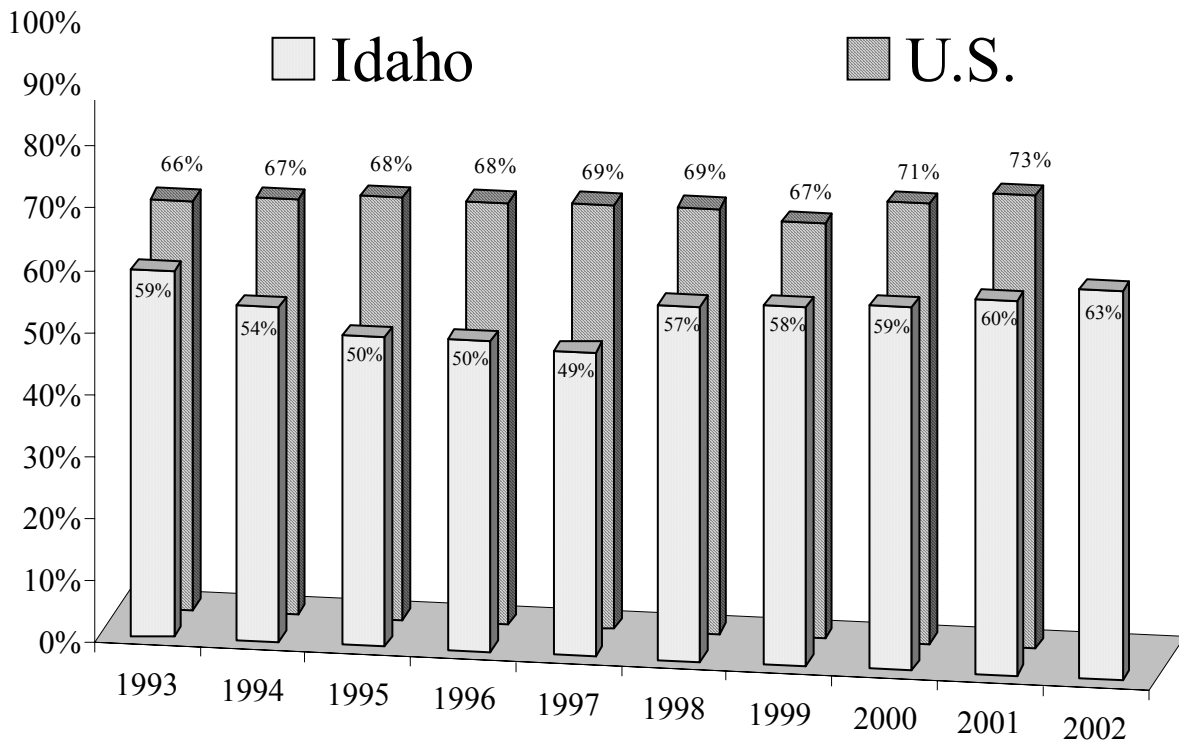
County	Location	Designated Road	Intersection	Usage
Canyon	26	Gekeler Rd	at W Boise Ave	69.0%
	27	Eagle Road	at Chinden Blvd	76.1%
	28	Jupiter (Entertainment)	at Overland	68.5%
	29	Adams Rd.	at E 44th St	49.8%
	30	SH 16	Jct w/ SH 44	68.1%
	31	Linden	at Indiana	61.7%
	32	US 20	at Middleton Rd	74.3%
	33	SH 55	at South 10th Ave	66.7%
	34	Centennial Way	at SH 19	63.0%
	35	I-84 - Off Ramp	Exit # 38-Garrity	65.0%
Elmore	36	Amity Rd	at South Side Blvd	63.0%
	37	Greenhurst	at 12th Ave	64.9%
	38	7th Ave	at 3rd St	62.2%
	39	I-84 Business Loop	at SH 51	59.9%
	40	I-84 - Off Ramp	Exit # 95	80.5%
	41	SH 51	at SH 67	47.5%
	42	American Legion	at 3rd East	49.3%
	43	3rd E St	at 10th N St	49.0%
Payette	44	McMurtrey	at Canyon Creek	49.5%
	45	US 95 (16th St)	at 8th St	59.9%
	46	8th Street	at Center St	59.7%
	47	US 95	at NW 16th St	62.8%
Blaine	48	SH 72	at US 30	62.4%
	67	Gannett Rd	at US 20	65.5%
	68	US 20	at Jct US 93/26	61.1%
	69	US 20	at SH 75	71.2%
Cassia	70	Saddle Rd	at Sun Valley Rd	49.8%
	71	Main St (SH 75)	at 1st St	60.4%
	72	Main St (SH 75)	at Bullion St	62.4%
	49	E. 5th St	at Overland	45.6%
	50	W Main	at Oakly	32.2%
	51	SH 77	at SH 81	60.2%
	52	I-84 - Off Ramp	Exit # 216	72.1%

2002 Usage by Observation Site – Continued

County	Location	Designated Road	Intersection	Usage
Minidoka	53	200 S.	at SH 27	41.9%
	54	Overland Ave	at 14th St	42.5%
	55	I-84 - Off Ramp	Exit #211 Rupert/Heyburn Exit	51.3%
	56	I-84 - Off Ramp	Exit # 201 Paul Exit	65.0%
	57	Overland Rd	at 5th St	57.4%
	58	O St	at 21st St	50.8%
	59	SH 24 (8th St)	at Meridian	51.9%
Twin Falls	60	SH 25	at SH 27	39.6%
	61	3700 N	at US 93	52.1%
	62	Blue Lakes Blvd	at Falls Ave	59.8%
	63	3rd St E	at 6th Ave N	60.2%
	64	Washington St	at South Park	61.0%
	65	Kimberly Rd (US 30)	at Eastland	58.5%
	66	Eastland Dr	at Orchard	57.8%
Bannock	73	Garrett Way (US 30)	at E Gould St	54.8%
	74	West Quinn Rd	at Poleline Rd	58.2%
	75	I-15 - Off Ramp	Exit # 47 (US 30)	69.4%
Bingham	76	S Main	at Benton Rd	60.2%
	77	Fir St	at US 91	49.0%
	78	US 91	at Fir St	59.9%
	79	W Judicial St	at Broadway	34.6%
Bonneville	80	I-15 - Off Ramp	Exit # 89	66.7%
	81	SH 43 (Ucon Exit US 20)	at SH 43/Yellowstone	55.6%
	82	Sunnyside Dr	at Woodruff Ave	64.6%
	83	Lincoln Rd	at Woodruff Ave	45.6%
	84	US 26	at 15th E (St Leon Rd)	54.0%
	85	Grandview Dr	at Skyline Dr	57.5%
	86	US 20	Riverside - Exit #93	66.8%
Madison	87	N Holmes Ave	at 5th St	64.2%
	88	I-15BL (Exit #113)	at Jct US 91	65.8%
	89	S 2nd E	at E 1st S	53.2%
	90	S 2nd W	at W 2nd S	52.8%
	91	US 20	at SH 33 (Rexburg Exit)	65.8%
	92	E Main St	at Center St	45.1%

Seat Belt Usage Trends

Idaho Seat Belt Usage vs. U.S. Seat Belt Usage



Slight changes in the observational seat belt survey existed from year to year prior to 1998. In 1998 the observational survey was completely revised to ensure national compliance and to produce a more accurate usage estimate. Comparisons of 1998 and future surveys to historical surveys (1986 – 1997) should be made conservatively as the new methodology differs greatly from the previous methodologies. The U.S. observed usage is calculated from the observed usage rates in each state. This figure is obtained from the National Center for Statistics and Analysis.

From 2001 to 2002 the Idaho observed seat belt usage increased slightly from 60.4% to 62.9%. This represents a 4.1% increase in seat belt usage from 2001 to 2002.

Observed Usage - Transportation District by Year

	1998	1999	2000	2001	2002	Ave Yearly Change 1998-2002
District 1	59.5%	52.1%	62.1%	57.7%	70.6%	5.5%
District 2	61.0%	58.5%	56.7%	56.6%	68.4%	3.4%
District 3	65.2%	64.7%	61.9%	64.6%	63.3%	-0.7%
District 4	36.8%	42.2%	45.9%	51.0%	53.6%	9.9%
District 5	40.3%	45.2%	46.7%	54.4%	55.4%	8.4%
District 6	49.3%	51.6%	51.5%	56.4%	57.8%	4.1%

Observed Usage – County by Year

	1998	1999	2000	2001	2002	Ave Yearly Change 1998-2002
Ada	67.6%	65.8%	63.8%	66.8%	64.3%	-1.2%
Bannock	42.3%	48.7%	49.5%	56.0%	58.5%	8.6%
Bingham	36.6%	39.7%	39.6%	51.8%	45.2%	6.6%
Blaine	48.8%	48.9%	38.9%	52.3%	60.0%	7.2%
Bonner	58.4%	48.4%	57.2%	54.4%	70.9%	6.7%
Bonneville	54.0%	58.8%	56.6%	63.4%	62.5%	3.9%
Canyon	57.8%	62.9%	58.3%	58.3%	63.2%	2.5%
Cassia	33.4%	38.7%	40.5%	49.1%	49.6%	10.7%
Elmore	52.7%	47.3%	55.0%	57.7%	52.9%	0.6%
Kootenai	60.6%	53.4%	64.6%	59.5%	70.2%	4.8%
Latah	58.6%	60.5%	61.5%	57.6%	74.0%	6.8%
Madison	43.7%	41.6%	45.1%	49.7%	52.4%	4.8%
Minidoka	29.5%	35.6%	44.3%	48.1%	48.5%	13.6%
Nez Perce	63.1%	57.0%	52.3%	56.2%	65.4%	1.5%
Payette	65.5%	66.6%	59.6%	63.3%	61.2%	-1.5%
Twin Falls	39.8%	46.4%	52.6%	54.4%	58.9%	10.4%